

Claims

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1. Capsule for storage and mixing and dispensing of dental material comprising:
a capsule body member providing a main chamber, and comprising a dispensing opening, and wherein the inner wall of the capsule body member comprises a recessed area;
an applicator member being slideably accommodated in said capsule body member, said applicator member providing an auxiliary chamber, and wherein said applicator member comprises a through-hole extending from the auxiliary chamber to the outer circumferential surface of the applicator member; and
an activator member being slideably accommodated in said applicator member; said through-hole and said recessed area forming a channel between said main chamber and said auxiliary chamber upon activation of said capsule by said activator member; said main chamber and said auxiliary chamber being selectively connectable for fluid communication between said chambers upon activation of said capsule by said activator member, wherein movement of said activator member towards said dispensing opening causes movement of said applicator member so that said channel between said main chamber and said auxiliary chamber is formed.
2. The capsule of claim 1, wherein said radially extending through-hole in said applicator member is initially covered by the wall of said capsule body member.
3. The capsule of claim 1 or 2, wherein said radially extending through-hole is located in close proximity to the separation wall of said applicator member separating said auxiliary chamber from said mixing chamber.
4. The capsule of claim 1, 2, or 3, wherein said through-hole extends essentially perpendicularly to the longitudinal axis of said applicator member.
5. The capsule of claim 1, 2, or 3, wherein said through-hole extends essentially at an

angle smaller than 90° to the longitudinal axis of said applicator member.

6. The capsule of claim 3, 4, or 5, wherein said separation wall comprise a raised area extending towards said activator member.

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7. The capsule of claim 6, wherein said raised area comprises an annular bulge.

8. The capsule of any of claims 1-6, wherein said applicator member comprises a sealing element sealing said through-hole of said applicator member against said recessed area of said body member and against the exterior of said capsule.

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9. The capsule of any of claims 1-8, said activator member comprising an activator sealing element for sealing said activator member against said applicator member.

- 15 10. The capsule of claims 7, or 8, wherein said sealing elements are manufactured by a two-component injection moulding process together with the capsule body member, the applicator member and said activator member.

11. Capsule for storage, mixing and dispensing of material comprising:
20 a capsule body member providing a main chamber, and comprising a dispensing opening;
an applicator member being slideably accommodated in said capsule body member,
said applicator member providing an auxiliary chamber; and
an activator member being slideably accommodated in said applicator member;
25 said main chamber and said auxiliary chamber being selectively connectable for fluid communication between said chambers upon activation of said capsule by said activator member;
wherein said activator member comprises an internal channel system extending from the rear end of the activator member to an annular groove remote from the rear end of said activator member.

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12. The capsule of claim 11, wherein said annular groove of said internal channel system is located adjacent to the front end of the activator member.

13. The capsule of claims 11 or 12, wherein said internal channel system accommodates a sealing material.

5 14. The capsule of claim 13, wherein the sealing material accommodated in the internal channel system of the activator member seals the gap between the applicator member and the activator member.

10 15. The capsule of claims 13 or 14, wherein the sealing material is a flowable hardenable material.

15 16. The capsule of any of claims 11 to 15, wherein the applicator member comprises a through-hole providing a channel between said auxiliary chamber in said applicator member and said main chamber.

17. The capsule of claim 16, wherein said through-hole is closed by a membrane.

20 18. The capsule of any of claims 11 to 17, said activator member comprising a convex or tapering or conical or truncated front end surface.

25 19. The capsule of any of claims 11 to 17, said activator member comprising a concave or funnel-shaped or reverse-truncated front end surface and a vent channel extending from said front end surface to the exterior or environment or surroundings, preferably via said internal channel system.

20 20. The capsule of any of claims 1 to 19, further comprising a dispensing cannula connected to said dispensing opening.

25 21. The capsule of claim 20, wherein the dispensing cannula is integrally formed with said capsule body member.

22. The capsule of claim 20, wherein said cannula is rotatably connected to said capsule body member thus providing a valve.

23. The capsule of any of claims 1 to 22, wherein said dental materials are glass ionomer cements or resin modified glass ionomer cements.

5 24. The capsule of any of the preceding claims, wherein said main chamber contains a first, preferably powdery, component of said material, and said auxiliary chamber contains a second, preferably liquid, component of said material.

25. Kit, comprising at least one of the capsules of any of the preceding claims.

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26. Use of the capsules of any of the preceding claims for mixing a material of two or more components.